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Memo

To:

Board of Managers

From:

Michael Younes, Director of Municipal Operations

Research by: Ellen Sands, Permitting and Code Enforcement Coordinator

CC:

Shana Davis-Cook, Village Manager

Date:

7/10/2014

Re:

Waste Reduction Initiatives

At the Board's request staff has performed research to explore how to further expand the Village's attention to being a "greener" community. This memo is provided to assist the Board in its discussion on the below referenced "zero waste" initiatives. No Board action is currently being proposed.

Background

In general "zero waste" is defined as the practice of eliminating the need to send solid waste to landfills or other processing plants such as incinerators. The Maryland State Department of the Environment has recently drafted a 25-year plan to work towards eliminating the disposal of solid waste and wastewater throughout the State.

"Zero waste" plans are developed to address waste reduction through many different methods such as recycling, energy and waste water (sewer) recovery and storm water recharge systems.

As part of the legislatively-mandated Greenhouse Gas Reduction Plan, passed in 2009, the State has established long-term (2040) recycling and waste diversion goals of 80% and 85%, respectively, referred to as "Zero Waste Maryland". Programs in the report include enhanced waste management reporting; new source reduction requirements; augmented composting, recycling and reuse guidance and mandates; clean energy recovery incentives; expanded materials and process bans; and numerous government "lead-by-example" initiatives.

¹ The Zero Waste Maryland plan is currently in draft form and has not been formally adopted by the Maryland Department of the Environment. Public comments on the plan are still being received and a date to finalize the plan has not been set. The draft plan can be found at the following web address: http://www.mde.maryland.gov/programs/Marylander/Documents/Zero Waste Plan Final Draft 4.30.14.pdf



Currently, no State or County has attained zero waste status; however the City and County of San Francisco has set a goal to achieve a zero waste status by the year 2020.

Many of the larger-scale initiatives—such as the reuse of storm and waste water and expanded bans on materials for manufacturing—fall outside the realm of the Village's control due to County or State existing oversight controls. But there are several ways the Village and its residents can help reduce the amount of waste generated and subsequently discarded, which are outlined below.

Recycling

The most notable waste reduction initiative is recycling. There are several different forms of recycling, which include material recycling, yard waste recycling, food waste recycling, electronic recycling, and metal recycling. The Village currently offers one of the more robust recycling programs within the County, by providing recycling collection for yard waste, materials (traditional paper, plastic, glass), and metals. Due to space constraints at the Village Hall, electronic waste recycling is coordinated with Montgomery County.

(Material Related)

Recycling of paper, plastic, glass and metal products has been around for decades. Previously when you recycled you were required to separate your paper products from your co-mingled materials. Now with the increased number of items eligible for recycling, single-stream recycling has grown in popularity from when it began in the 1990s.

Single-stream recycling has many advantages such as increased recycling rates (since residents are not required to separate materials) and reduced collection costs (because local government does not need specialized trucks that have separated compartments or the need to travel to multiple recycling processing sites).

In the Village, we have been participating in single-stream recycling practices for almost a decade and accordingly the amount of recyclables we collect has steadily increased over that period. In order to further promote recycling throughout the Village, new large capacity toters were recently approved, which should arrive by mid-July. It is estimated that approximately 70% of Village households participate in our recycling program in varying degrees.

The following items are eligible to be recycled in the Village:

Commingled Glass, Metal and Plastics

- Glass: All jars and bottles (all colors).
- Metal: All aluminum and steel food and beverage cans and aluminum foil products such as balled foil wraps, and foil cookware.
- Plastics: All plastic bottles.

Mixed Paper

- Newspaper and all advertising inserts;
- Magazines and glossy paper products, mail order catalogs, etc.;
- Cardboard: cereal boxes, packing boxes, etc.
- Telephone books, paperback books; and
- Plain paper, unwanted mail, computer paper.

In addition to general material recycling the Village routinely collects scrap metal from the weekly bulk (special) pick-ups conducted by the Village Public Works Department. The scrap metals are hand sorted by Public Works personnel and delivered to Montgomery County to be recycled into other metal products.

Public Works personnel also transfer e-waste such as old computers, monitors, and printers to Montgomery County for recycling on a routine basis.

(Yard Waste Related)

Collection of waste generated from yard work and leaves is a critical aspect of waste reduction initiatives. Much of the yard waste generated has been treated with fertilizers, weed killers or other chemicals that make it hazardous to the ecosystem, when washed down storm drains and into our waterways. In order to reduce the amount of yard waste generated, communities implement yard debris recycling programs. These programs reuse yard clippings, fallen leaves, and wood chippings for organic mulch and soil for a variety of uses.

Currently, the Village Public Works Department collects garden and yard waste each day from Village residents. Once collected the garden and yard waste is taken to the Montgomery County recycling transfer station where it is recycled into organic mulch and soil. It is estimated that approximately 75% of Village households participate in the collection. Each autumn fallen leaves are also collected and recycled into mulch and other organic compost.

In addition, any wood chips generated by the Village's tree maintenance contractor when working in the Village are recycled into mulch and wood chips which are reused at area playgrounds and horse stables.

Composting

One area where the Village does not have a current program is for the recycling of food waste, also known as composting. While some use the waste to create soil, others programs collect food waste to feed farm animals. On average a family of 4 generates 1,900 lbs. of food waste per year. While the concept of composting is not new, commercial or government supported composting programs are only starting to pick up steam and many are only in pilot program form due to the limited number of offsite locations that accept food waste.

Currently, several Maryland jurisdictions have food waste recycling pilot programs, including the City of College Park, University Park, City of Takoma Park, Town of Somerset and Town

of Chevy Chase. The most established programs are run by the City of Takoma Park and University Park.

University Park's program has been running since 2011, and currently 36% of the community participates in the pilot program. Food waste is collected by their Public Works Department; each home that participates is given a 5-gallon plastic screw top bucket with biodegradable liners. On average University Park collects about a ½ ton of food waste per week. Overall the program is well received by University Park's residents.

The City of Takoma Park has also established a pilot program in 2 sections of the City. The City is experimenting with 2 different programs; one is collected by the City and the other is collected by a private contractor, called the Compost Crew. Overall participation ranges from 30% - 50% of the 2,300 eligible homes. Both programs utilize 5-gallon screw top buckets with biodegradable plastic bag liners like in University Park. Residents are required to purchase the liners, which cost roughly \$0.25 per bag.

Below is a breakdown of the costs and participation rates:

	Cost	Funded by:	Collection by:	Participation Rate
City of Takoma Park	\$11.25/house/month (\$67,500/year)	City	Contractor	30%
	\$72/ton – tipping fee ² (average 3,744/year)	City	In-house	50%
Town of University Park	\$25/ton – tipping fee ² (average \$650/year)	Town	In-house	36%

One of the major issues with food waste recycling is that there are a limited number of locations to take the waste in the State. Currently only two (2) sites in the State recycle the waste into soil. The only other locations that accept food waste recycling are farms, where it is processed into feed for animals.

The most common concern with food waste recycling programs is controlling potential rodent infestations. Overall the City of Takoma Park and University Park have not seen an increase in animals or rodents chewing or foraging for the food waste. This is attributed to the use of screw top buckets and routine collection practices. No open air composting practices are conducted in these jurisdictions to avoid an increase in rodent activity.

The Town of Chevy Chase and Town of Somerset are the 2 closest jurisdictions to the Village that offer food waste recycling. The Town of Somerset has coordinated food waste recycling for its residents, and any resident who wishes to recycle their food waste can contract directly with the Compost Crew at reduced rates. Like the City of Takoma Park and University Park households use 5-gallon screw top buckets with biodegradable liners. No other support is provided by the Town. However, just recently the Town of Somerset has put a hold on its

 $^{^{\}rm 2}$ Cost does not include City or Town Public Works Labor Rates.

composting program to allow bids to be solicited for a compost contract. It is anticipate that the Town will restart its program for the FY2016 budget year.

The Town of Chevy Chase currently runs a similar service to the program in the Town of Somerset; however, collection costs for one bin, per week, per household are paid for by the Town. Additional bins and associated costs are contracted by the resident directly with the Compost Crew.

Below is a breakdown of the costs and participation rates:

	Cost	Funded by:	Collection by:	Participation Rate
Town of Somerset ³	\$25-\$30/house/month	Resident	Contractor	Unknown
Town of Chevy Chase	\$9.50/house/month (1-bin)	Town	Contractor	24%
	\$10/house/month (each additional bin)	Resident		

Public Awareness Campaigns

Regardless of the programs and practices to reduce the amount of waste generated and disposed of, the single most important tool is public awareness. A main focal point included in every "zero waste" plan or proposal is public awareness and education. Residents and citizens must be educated on how to reduce, reuse and recycle.

It often falls to the government to educate its citizens. In the Village we have an "Energy & Environment Committee" to assist in educating residents. In order to further waste reduction initiatives, the Committee could be tasked by the Board to focus its efforts on providing educational seminars, training and materials to Village residents outlining how they can reduce the amount of non-renewable waste in their lives.

In Conclusion

Overall, the Village has successful programs for conventional recycling, which are effective for a residential community. Obtaining the goal of "zero waste" for the Village would prove to be very difficult to achieve. There aren't sufficient viable opportunities at this time for it to be a realistic goal. There are opportunities, however, for engaged residents to privately increase recycling efforts, thereby reducing their household's discarded waste.

For now, increased awareness – perhaps through the involvement of the Energy & Environment Committee –to educate residents and encourage further recycling efforts on an individual basis until such time as more options are feasible for the greater community.

³ Data based on Town composting prior to program hold.

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